

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Kuehnle AgroSystems Co.

Hawaii HTDC- MEP

Kuehnle AgroSystems Inc. Develops Algae Photobioreactor Pilot Plant

Client Profile:

Kuehnle AgroSystems Inc. (KAS) based in Honolulu, Hawaii is a privately-owned biotech company focused on developing unique microalgae strains optimized for use in a variety of industries including carbon capture, biofuels, waste water remediation and high value compounds. The company employs 3 people.

Situation:

KAS has focused on conducting advanced R&D on algae production for biofuel technology for several years. The technology addresses the national goal of developing an alternative energy industry to enable the replacement of fossil fuels. One of the keys to commercialization is to demonstrate the scalability up to millions of gallons of biofuel per year, which will require hundreds to thousands of acres of land. Developing production capacity would be important in integrating KAS into a larger portion of the value chain as a strain selector, optimizer, seed stock provider and service provider for large scale developers of carbon capture and waste water remediation and renewable energy production. Subsequently, KAS was trying to find an outdoor location to develop a pilot facility for the production of the algae seedstock and called upon Hawaii HTDC- MEP (Hawaii MEP), a NIST MEP network affiliate, for help.

Solution:

Hawaii MEP helped KAS identify a location to set up the photo bioreactor and obtain buy-in from landowners. Hawaii MEP assisted KAS through the State permitting process to enable the development and operation of the outdoor pilot scale production facility. In addition, Hawaii MEP oversaw the operational planning and project management of the construction of the infrastructure, equipment and supporting facilities. In addition, Hawaii MEP worked with KAS to secure State matching funds to expand a federal R&D contract, and provided assistance with the development of a commercialization plan.

Results:

- * Increased revenue by \$500,000.
- * Completion of project on-time and within budget.
- * Achieved a more competitive and profitable position.

Testimonial:

"KAS is so thankful for the work that has been delivered. The accomplishments, advice and support have been so instrumental to the health and growth of the company and its employees. The development of the pilot facility has brought the company to another level of operational capability, scale-up expertise and attractiveness to collaborators and investors."

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Dr. Adelheid Kuehnle, President